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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/837,807	04/17/2001	Hernan Jose Clarke	153308.90011	8491

26707 7590 09/15/2005

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EXAMINER	
STERRETT, JONATHAN G	
ART UNIT	**PAPER NUMBER**
3623	

DATE MAILED: 09/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/837,807	CLARKE, HERNAN JOSE	
	Examiner	Art Unit	
	Jonathan G. Sterrett	3623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 July 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-23* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-23* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Summary

1. This **Final Office Action** is responsive to applicant's amendment filed July 1, 2005. Applicant's amendment of July 1, 2005 cancelled **Claim 1** and added **Claims 2-23**. Currently **Claims 2-23** are pending.

Response to Amendments

2. The rejection of Claim 1 under 35 U.S.C 101 and 102 is made moot by the cancellation of Claim 1.

Response to Arguments

3. The applicant's arguments have been fully considered, but they are moot in view of new grounds of rejection.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. **Claims 2-23** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rush US 6,119,102** in view of **Hazama US 6,539,399**.

Regarding **Claim 1**, Rush discloses:

a data organizer for: receiving work card data into the computer system,

column 11 line 9-11, the MPS system (i.e. data organizer) receives demand documents (i.e. including work card data) into the computer system.

parsing the work card data into predetermined sets of data components according to processing requirements of a plurality of scheduling parameters;

column 12 line 27-31, The MPS pass-through model accumulates data from the demand document (i.e. demand documents include work card information) and parses the data into predetermined sets of data components (see column 6 line 20-60 for a table of fields in the MPS master file beginning with 'part description' and 'part number'). These fields are constructed according to processing requirements of a plurality of scheduling parameters.

comparing a first set of the data components with a second set of the data components to identify a dependency between the first and second sets of the data components, and

Figure 2, the MPS regeneration compares a first set of data components (i.e. data from the demand documents including customer orders (which include work orders)) with a second set of data components (i.e. data from the supply documents) to identify a dependency between the demand and supply. This dependency determined by if there are enough components available to fulfill the customer order as it is exploded into a component level BOM.

linking the first and second sets of the data components in a linking

relationship;

Figure 6, this view of the MPS shows how demand and supply for a given component are linked in a linking relationship.

a data storage device coupled to an output of the data organizer, wherein the data storage device stores the first and second sets of the data components which are received from the data organizer;

column 9 line 40-45, the MPS is stored in a table (i.e. data storage device) wherein the first and second sets of data which are received from the demand and supply documents. – see also Figure 2, every time the MPS is regenerated, the results are updated and stored in a data storage device, note 'MRP results'.

a data processing application which performs scheduling calculations upon the first and second sets of the data components using the plurality of scheduling parameters; and

Figure 4, the MPS regeneration is a data processing application which performs scheduling calculations upon the first and second sets of the data components (demand and supply as noted above) using the plurality of scheduling parameters shown (see right hand side check boxes) – also see Figure 6 which shows a table including an 'ATP' column; available to promise is the result of a scheduling calculation that shows whether or not a given sales order is entered such that lead time or supply of components is such that the order can be fulfilled, i.e. supply is 'available to promise' against the order.

Furthermore, Rush highlights the need to bring data into the processing application (Figure 2). Rush also discloses the need to store the MPS data and discloses how it is to be transacted and updated.

Rush does not teach:

a communication channel respectively coupled between the data storage device and the data processing application for routing the first and second sets of the data components to the data processing application.

Hazama teaches:

a communication channel respectively coupled between the data storage device and the data processing application for routing the first and second sets of the data components to the data processing application.

Figure 3, a communication channel between the data storage device (database #42) and API (#68) to application (#66), allows for routing of data – see also column 5 line 56-60.

Hazama teaches that the distributed data management system of his invention enables a user to save time when operating on the files associated with a part.

Both Rush and Hazama teach data processing in support of manufacturing operations, thus Rush and Hazama are analogous art.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Rush, regarding providing MPS functionality to balance demand and supply in a manufacturing environment, to include the step of running the MPS application in a distributed data management system, as taught by Hazama, because it would save time and effort for a user in updating data records in the system.

Regarding **Claim 3**, Rush teaches:

wherein the work card data includes a virtual template which is representative of a work card.

Figure 6 illustrates a virtual work card template (screenshot of item level MPS) which includes work card data that is representative of a work card in that it contains production data for a single part number, in this example 'part 1-0".

Regarding **Claim 4**, Rush teaches:

a graphical user interface (GUI) which displays the first and second sets of the data components and configures the data processing application.

Figure 6 as reference above is a GUI which displays the first (demand) and second (supply) sets – see columns 'demand' and 'projected available'.

Figure 4 illustrates a GUI which configures the data processing application (i.e. the MPS).

Regarding **Claim 5**, Rush teaches:

wherein the first and second sets of the data components are organized using a plurality of work card identification numbers which are derived from the work card data.

Figures 7 and 8 illustrate how the MPS application organizes the first and second (i.e. supply and demand) sets of data components that are organized using a plurality of part numbers (i.e. supply and demand is organized according to part number) which are derived from the work card data (i.e. input demand documents discussed in Claim 1 above.

Regarding **Claim 6**, Rush teaches:

wherein the data organizer links the first and second sets of the data components in a start-to-finish, start-to-start, finish-to-finish or finish-to-start relationship.

Figure 11 illustrates how the MPS system links supply and demand (i.e. first and second sets) in a start to finish relationship. In particular the two top boxes in the center "consume as much demand as possible with on-hand" and "Is this demand fully satisfied?" illustrate this process; i.e., the capacity in the factory (supply) is linked in a start to finish relationship with the demand so that demand is linked to available supply in a start to finish relationship.

Regarding **Claim 7**, Rush teaches:

wherein the scheduling calculations further include forecasting and optimization scheduling.

Figure 4, the scheduling calculations in the MPS include forecasting.

Figure 7 shows the MPS forecast calendar with the forecast detail.

Column 8 line 26-30, the MPS system optimizes the scheduling of production so that demand is met according to a schedule.

Regarding **Claim 8**, Rush teaches:

wherein the forecasting and optimization scheduling further includes a what-if or scenario- based analysis.

Column 8 line 26-30, the MPS system optimizes the scheduling of production so that demand is met according to a schedule. Since part of the scheduling calculations take into account forecasts, these are scenario- based analyses to schedule demand according to a particular scenario.

Regarding **Claim 9**, Rush teaches:

wherein the forecasting and optimization scheduling further includes a leveling optimization process.

Column 11 line 29-31, all transactions for a particular time frame within a specified window are accumulated. These include those related for both demand and supply.

Column 16 line 28-30. the MPS system performs a leveling optimization process by leveling the meeting of demand for each time period in question.

Regarding **Claim 10**, Rush teaches filling customer demand in a manufacturing environment and teaches tracking labor cost as a processing cost in the factor (column 18 line 41 – labor cost is tracked).

Rush does not teach:

wherein the graphical user interface is operable to display a histogram representative of the budgeted man-hours of labor and a curve representative of the actual man-hours of labor.

However, Official Notice is taken that it is old and well known in the art to display histograms to represent data. Histograms provide for an efficient means to show groupings of data so inferences can be made from the data as a group.

Official Notice is also taken that it is old and well known in the art to compare budgeted and actual costs, including man-hours of labor. This provides a way to ensure profitability by tracking costs per the budget.

Official Notice is taken that it is old and well known in the art to graphically display two types of data on a graph using different methods, including a histogram and a curve, because they provide an efficient way to highlight two different types of data on a graph.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Rush and Hazama, regarding providing for MPS scheduling in a manufacturing environment and using a GUI to interface with the MPS, to include the step of displaying a histogram and curve to illustrate budgeted vs actual man-hours of labor, because it would provide an efficient way to track labor man-hours to ensure they did not exceed their budgeted amount.

Regarding **Claim 11**, Rush teaches:

wherein the data processing application is configurable to calculate a minimum threshold buffer for the first and second sets of the data components.

Column 14 line 11-14, inventory safety stock (i.e. a minimum threshold buffer) is calculated for the first and second sets (i.e. as a threshold between demand and supply).

Claims 12, 14, 15 and 18-23 recite limitations similar to those addressed in the rejection of **Claims 1-11** above, and are therefore rejected under the same rationale.

Regarding **Claim 13**, Rush teaches:

Wherein the work card data includes an identification number to match the first set of data components with the work card data template.

Column 14 line 27, Document number matches the document (ie work card data template) with the set of data components associated with that document.

Regarding **Claim 16**, Rush teaches:

Matching available capacity in the factory with demand to fulfill the demand using scenario-based forecasting calculations.

Rush does not teach where the scenario-based forecasting calculations take available man-hours of labor into account.

Official Notice is taken that it is old and well known in the art to take available labor, including man-hours, into account when scheduling, because the labor used in manufacturing is a resource that can constrain capacity.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the collective teachings of Rush and Hazama, regarding providing a distributed computing MPS system in a factory, to include the step of taking available labor into account when scheduling, because it would ensure that labor is most efficiently applied in the factory.

Regarding **Claim 17** Rush teaches:

Wherein performing scenario-based forecasting calculations further includes comparing a baseline schedule with an available plurality of schedule configurations.

Column 21 line 41-45, the MRP pass through model compares the Master Schedule quantity with an available plurality of schedule configurations. These other configurations include 'greater of stockout/forecast', forecast, stockout quantity and master schedule quantity. This comparison is performed so that a stockout does not occur.

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6345259 by Sandoval discloses a system for integrating business and manufacturing environments.

US 6415259 by Wolfinger discloses a work progress tracking and optimization system.

US 2001/0056362 by Hanagan discloses a modular convergent customer care system.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonathan G. Sterrett whose telephone number is 571-272-6881. The examiner can normally be reached on 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq Hafiz can be reached on 571-272-6729. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JGS

JGS 9-10-05

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